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| 10/798,238      | 03/11/2004  | Charles Barry Ward   | 028924.029          | 3553             |

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SMITH, GAMBRELL & RUSSELL, LLP  
SUITE 3100, PROMENADE II  
1230 PEACHTREE STREET, N.E.  
ATLANTA, GA 30309-3592

EXAMINER

RO, BENTSU

ART UNIT PAPER NUMBER

2837

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/798,238

Applicant(s)

WARD, CHARLES BARRY

Examiner

Bentsu Ro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/11/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## FIRST OFFICE ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lorenz et al US Patent No. 4,751,450.

Claims read onto Lorenz et al teaching as follows:

|   |   |
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| <p>Claim 1. A motor starting device for a single phase split capacitor induction motor connected to a source of alternating current voltage,</p> <p>the motor having a run winding,</p> <p>a start winding,</p> <p>and a start capacitor,</p> <p>the starting device comprising:</p> <p>an auxiliary start capacitor;</p> <p>a switching device comprising:</p> | <p>Lorenz et al Fig. 2 shows a motor starting device for a single phase split capacitor induction motor connected to a source of alternating current voltage; the source of alternating current voltage is shown at reference numeral 4;</p> <p>Fig. 2 shows a motor main winding 1 which is a motor run winding;</p> <p>Fig. 2 shows an auxiliary winding 2 which is a start winding;</p> <p>Fig. 2 shows a run capacitor 7 which is a start capacitor;</p> <p>Fig. 2 shows a start capacitor 5 which is an auxiliary start capacitor;</p> <p>Fig. 2 shows two start switches 6 and the associated circuit elements;</p> |
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| <p>a switch which, when closed, connects the auxiliary start capacitor in parallel with the start capacitor;</p> <p>a switch activation circuit for opening and closing the switch;</p> <p>a rectifier</p> <p>connected through the motor windings to the source of alternating voltage for producing a source of direct current voltage when the source of alternating current voltage is connected to the motor;</p> <p>a control circuit connected to the source of direct current</p> <p>and connected to the switch activation circuit for selectively energizing and deenergizing the switch activation circuit; and</p> | <p>either one of the SCRs 82, 90, when closed connects the start capacitor 5 in parallel with the run capacitor 7;</p> <p>the LEDs 68, 70, the TRIACs 74, 76, etc constitute a switch activation circuit for opening and closing the SCR switches 82, 90;</p> <p>any one or all of the rectifier diodes 12, 14, 10;</p> <p>the anode of diode 14 connects via terminal T2 and the motor the main winding 1 to the switch 3 and to one polarity of the AC source 4 (the bottom polarity) for producing a source of direct current voltage when the source of alternating current voltage is connected to the motor via the switch 3;</p> <p>the anode of diode 14 also connects via capacitor 7, auxiliary winding 2 and switch 3 to the one polarity of the AC source 4;</p> <p>the diode 12 connects to the auxiliary winding 2 via a resistor 36;</p> <p>the diode 12 also connects to the motor main winding 1 via terminal T4, capacitor 7 and terminal T2;</p> <p>the comparators 31-34 and the associated electronic components (resistors, capacitors, etc) constitute a control circuit; the comparators 31-34 are connected to the cathodes of diodes 12, 10, 14 to receive the dc voltage;</p> <p>the comparators 31-34 also connect to the LEDs 68, 70 for selectively energizing and deenergizing the switch activation circuit;</p> |
|--|--|

|   |  |
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| <p>a switch protection circuit</p> <p>connected to the auxiliary start capacitor</p> <p>for maintaining the source of direct current voltage connected to the control circuit when the source of alternating current voltage is disconnected from the motor.</p>  | <p>the cut-in comparator 32 and the cut-out comparator 31 constitute a switch protection circuit;</p> <p>the inverting or non-inverting inputs of comparators 31, 32 are connected to the start capacitor 5 via the diode 12 and resistor 36;</p> <p>the comparators 31 and 32 compare the dc voltages in the capacitors 42, 24, 25, charged by the dc voltage from diodes 10, 12, 14 to maintain the dc voltage inputted to the comparators 31, 32 when the ac source is disconnected briefly from the motor;</p> <p>see the operation of the blanking interval circuit described in columns 4 and 5.</p> |
| <p>2. The motor starting device of claim 1, wherein the switch protection circuit further comprises diodes connected to the start capacitor and the auxiliary start capacitor</p> <p>in order to conduct charge from either the start capacitor or the auxiliary start capacitor to the control circuit after the source of alternating current voltage is disconnected from the motor.</p> | <p>at least the diode 12 and may include the diode 14;</p> <p>the diode 12 charge from capacitors 5 and 7 to the capacitor 42;</p> <p>also see the operation of the blanking interval circuit described in columns 4 and 5.</p>  |

3. Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 6-9 are allowable.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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6. Any inquiry concerning this communication should be directed to Bentsu

Ro at telephone number 571 272-2072.

3/24/2005

  
Bentsu Ro  
Senior Examiner  
Art Unit 2837